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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,698	01/05/2004	Peter C. Williams	22188/06727	1697

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CALFEE HALTER & GRISWOLD, LLP
800 SUPERIOR AVENUE
SUITE 1400
CLEVELAND, OH 44114

EXAMINER

NICHOLSON, ERIC K

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/707,698

Applicant(s)

WILLIAMS ET AL

Examiner

Eric K Nicholson

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Related Applications

Applicant is required to draw a clear line of demarcation between the claims of the present application and applicant's related co-pending parent application 10/374,026.

Drawings

The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ferrule having a "substantially continuous cylindrical interior wall" in combination with a "curved" driven surface as claimed in claim 7 must be shown or the feature cancelled from the claim. **No new matter should be entered.**

Claim Objections

Claims 2-5,10-20,23-25,27,30-34,36 and 37 objected to because of the following informalities: In the claims 2-5,10-20,23-25,30-34,36 and 37 the term "toggle-like hinging action" is objected to since the normal use of the word "toggle" is to move back and forth repeat ably. This is not the case of the ferrule as once it is deformed inward by the drive member it does not toggle back at any time even if the drive member is removed. The action maybe termed as "hinging" but to term the radially

inward deformation as "toggle-like" appears to be incorrect. Claim 27 fails to further limit the claim from which it depends. Claims 27 recites a recess the interior wall of the ferrule however claim 21 from which claim 27 depends clearly recites that the interior wall is a substantially continuous cylindrical wall and as such claim 27 does not further limit claim 21 rather it contradicts claim 21. Appropriate correction is required.

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10,11,13,14,16,18,19,21,23,24,26,28,30,31 and 34 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 4,556,242 to Kowal et al..

The Kowal et al. coupling discloses in fig. 1 a tube fitting 10 having a fitting body 11 with a cylindrical bore 14 for receiving a tube end "T" and including a tapered mouth 13 at one end of the bore that forms a camming surface. A drive member 18 joinable with the body via threads 22,23 and having a ferrule drive surface 20. A ferrule 24 has a tapered nose portion 28 that extends into the tapered mouth 13 of the fitting body 11 with a substantially continuous

cylindrical interior wall 26 that closely surrounds the tube end "T" and a driven surface 37,38 on a back end thereof that engages the ferrule drive surface 37,38. The ferrule has a rear portion of the cylindrical interior wall that is radially spaced from the tube end upon pull-up of the fitting. Compare figs. 1 and 2 wherein fig. 2 illustrates the rear portion of the ferrule in the pull-up position. A forward edge of the tapered nose portion 27 penetrates 29 an outer surface of the tube end "T" and a collet portion 24 or 30 of the substantially continuous cylindrical interior wall is axially behind the forward edge and upon pull-up of the fitting is deformed radially against the outer surface of the tube end to grip the tube end. Again compare figs. 1 and 2 wherein fig. 2 illustrates the collet portion 24 or 30 of the ferrule being radially deformed against the tube. As to claims 11 and 18 the outer surface of the tube and is compressed by the collet portion with high radial gripping pressure has shown by figure 2. As to claims 13,26 the drive member ferrule drive surface initially contacts the ferrule driven surface at a location radially outwardly to at least a central portion of the ferrule driven surface has clearly shown in figure 1. As to claims 14,19 and 28 the cross-hatching clearly indicates a metal composition. As to claim 31, see column 2 lines 45 to 55. As to claim 34, note that the driven surface at the back end of the ferrule is a convex curved surface.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8,12,17,22,25,32,35,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 5,934,714 to Sugiyama et al. As noted above the Kowal et al. discloses all of the features of the the claimed device however it is not taught to case hardened the ferrule about its entire surface. Sugiyama et al. discloses that it is known in the prior art to provide a *similar* type coupling with a ferrule 4 being case hardened via carburization (column 1, lines 45-67 continuing on to column 2, lines 1-3) in order to properly bite into the inserted tube. It would have been obvious to one having ordinary skill in the art at the time the invention was made to harden the ferrule of Kowal et al. via carburization as taught in the prior art of Sugiyama, in order to provide a more secure coupling for the inserted tube due to increased compressibility of the ferrule into the surface of the inserted tube.

Claims 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 5,954,375 to Trickle et al. As noted above the Kowal et al. coupling discloses the claimed device however the inner surface of the ferrule is continuous and does not include a recess between the front portion and the rear portion. Trickle et al. discloses that it is known in the art to provide a *similar* type coupling with a recess 258

along the inner surface of the ferrule 218 (see fig. 15 and columns 10-11) for added gripping of the tube due to increased hinging of the ferrule. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate a recess in the inner surface of the ferrule of Kowal et al. such as taught by recess 258 of Trickle et al. in order to provide a more secure coupling for the inserted tube owing to increased compressibility of the ferrule due to the hinging effect of the front portion of the ferrule.

Claims 15,20 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 4,304,422 to Schwarz. As noted above the Kowal et al. coupling discloses the claimed invention except for the particular material of the ferrule being stainless steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the ferrule from a well known corrosion resistance material such as stainless steel such as disclosed by Schwarz in column 4, line 47 that it is known in the art to construct a *similar* type ferrule in a similar type coupling from stainless steel in order to improve the couplings resistance to corrosion and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claim 9 is rejected under 35 U.S.C. § 103 as being unpatentable over U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 5,934,714 to Sugiyama et al. as applied to claims 1-8,12,17,22,25,32,35,36 and 37 above, and further in view of U.S. patent 4,304,422 to Schwarz. Claims 15,20 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. patent 4,556,242 to Kowal et al. in view of U.S. patent 4,304,422 to Schwarz. As noted in the above rejection the combination of Kowal et al. and Sugiyama et al. coupling discloses the claimed invention except for the particular material of the ferrule being stainless steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the ferrule of Kowal et al. from a well known corrosion resistance material such as stainless steel such as disclosed by Schwarz in column 4, line 47 that it is known in the art to construct a *similar* type ferrule in a similar type coupling from stainless steel in order to improve the couplings resistance to corrosion and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

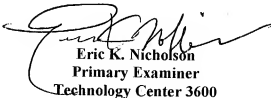
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Nicholson whose telephone number is (703) 308-0829. The examiner can normally be reached on Tuesdays thru Fridays from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola, can be reached on (703) 308-2686. The fax phone number for Technology Center 3600 is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center receptionist whose telephone number is (703) 308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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4/20/04



Eric K. Nicholson
Primary Examiner
Technology Center 3600